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Hazardous Waste and Emergency Response

U. S. Department of Labor
Occupational Safety and Health Administration
1989

OSHA 3114

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Hazardous Waste and Emergency Response

U.S. Department of Labor
Elizabeth Dole, Secretary

Occupational Safety and Health Administration
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Preface

This booklet provides a broad overview and summary of the OSHA standard on Hazardous Waste Operations and Emergency Response. This is the first publication in a series of topics on hazardous waste. OSHA plans to publish in the near future other informational pamphlets on emergency response and training.

Introduction

The dumping of hazardous waste poses a significant threat to the environment. In 1985, the Environmental Protection Agency (EPA) managed about 275 million metric tons of hazardous waste at licensed Resource Conservation and Recovery Act (RCRA) sites.* Hazardous waste is a serious safety and health problem that continues to endanger human and animal life and environmental quality. Hazardous waste--discarded chemicals that are toxic, flammable or corrosive--can cause fires, explosions, and pollution of air, water, and land. Unless hazardous waste is properly treated, stored, or disposed of, it will continue to do great harm to all living things that come into contact with it now or in the future.

Because of the seriousness of the safety and health hazards related to hazardous waste operations, the Occupational Safety and Health Administration (OSHA) has issued a final standard specifically developed to protect workers in this environment and to help them handle hazardous wastes safely and effectively.

The standard covers workers employed in cleanup operations at uncontrolled hazardous waste sites and at EPA-licensed waste treatment, storage and disposal (TSD) facilities; as well as workers responding to emergencies involving hazardous materials (e.g., spills).

State, county, and municipal employees such as police, ambulance workers, and firefighters with local fire departments, will be covered by the regulations issued by the 25 States operating their own OSHA-approved safety and health programs (see listing at the end of this booklet). EPA regulations will cover these employees in States without State plans. These regulations will be based on OSHA's standard.

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*U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, *The Hazardous Waste System* (Washington, D. C., 1987), p. ES-2.

This booklet discusses OSHA's requirements for hazardous waste operations and emergency response at uncontrolled hazardous waste sites and TSD facilities and summarizes the steps an employer must take to protect the health and safety of workers in these environments.

Safety and Health Program

An effective and comprehensive safety and health program is essential in reducing work-related injuries and illnesses and in maintaining a safe and healthful work environment. The standard, therefore, requires each employer to develop and implement a written safety and health program that identifies, evaluates, and controls safety and health hazards and provides emergency response procedures for each hazardous waste site or treatment, storage, and disposal facility. This written program must include specific and detailed information on the following topics:

- An organizational workplan
- Site evaluation and control,
- A site-specific program,
- Information and training program,
- Personal protective equipment program,
- Monitoring,
- Medical surveillance program,
- Decontamination procedures, and
- Emergency response program.

The written safety and health program must be periodically updated and made available to all affected employees, contractors and subcontractors. The employer also must

inform contractors and subcontractors, or their representatives, of any identifiable safety and health hazards or potential fire or explosion hazards before they enter the work site.

Each of the components of the safety and health program is discussed in the following paragraphs.

Workplan

Planning is the key element in a hazardous waste control program. Proper planning will greatly reduce worker hazards at waste sites. A workplan should support the overall objectives of the control program and provide procedures for implementation and should incorporate the employer's standard operating procedures for safety and health. Establishing a chain of command will specify employer and employee responsibilities in carrying out the safety and health program.

For example the plan should include the following:

- Supervisor and employee responsibilities and means of communication,
- Name of person who supervises all of the hazardous waste operations, and
- The site supervisor with responsibility for and authority to develop and implement the site safety and health program and to verify compliance.

In addition to this organizational structure, the plan should define the tasks and objectives of site operation as well as the logistics and resources required to fulfill these tasks. For example, the following topics should be addressed:

- The anticipated clean-up and/or operating procedures,
- A definition of work tasks and objectives and methods of accomplishment,

- The established personnel requirements for implementing the plan, and
- Procedures for implementing training, informational programs, and medical surveillance requirements.

Necessary coordination between the general program and site-specific activities also should be included in the actual operations workplan.

Site Evaluation and Control

Site evaluation, both initial and periodic, is crucial to the safety and health of workers. Site evaluation provides employers with the information needed to identify site hazards so they can select appropriate protection methods for employees.

It is extremely important, and a requirement of the standard, that a trained person conduct a preliminary evaluation of an uncontrolled hazardous waste site before entering the site. The evaluation must include all suspected conditions that are immediately dangerous to life or health or that may cause serious harm to employees (e.g., confined space entry, potentially explosive or flammable situations, visible vapor clouds, etc.). As available, the evaluation must include the location and size of the site, site topography, site accessibility by air and roads, pathways for hazardous substances to disperse, a description of worker duties, and the time needed to perform a given task, as well as the present status and capabilities of the emergency response teams.

Periodic reevaluations should also be conducted for treatment, storage, and disposal facilities, as conditions or operations change.

Controlling the activities of workers and the movement of equipment is an important aspect of the overall safety and health program. Effective control of the site will minimize potential contamination of workers, protect the public from

hazards, and prevent vandalism. The following information is useful in implementing the site control program: a site map, site work zones, site communication, safe work practices, and the name, location and phone number of the nearest medical assistance.

The use of a "buddy system" is also required as a protective measure to assist in the rescue of an employee who becomes unconscious, trapped, or seriously disabled on site. In the buddy system, two employees must keep an eye on each other and only one should be in a specific dangerous area at one time, so that if one gets in trouble, the second can call for help.

Site-Specific Safety and Health Plan

A site-specific safety and health plan is a complementary program element that aids in eliminating or effectively controlling anticipated safety and health hazards. The site-specific plan must include all of the basic requirements of the overall safety and health program, but with attention to those characteristics unique to the particular site. For example, the site-specific plan may outline procedures for confined space entry, air and personal monitoring and environmental sampling, and a spill containment program to address the particular hazards present at the site.

The site safety and health plan must identify the hazards of each phase of the specific site operation and must be kept on the work site. Pre-entry briefings must be conducted prior to site entry and at other times as necessary to ensure that employees are aware of the site safety and health plan and its implementation. The employer must also ensure that periodic safety and health inspections are made of the site and that all known deficiencies are corrected prior to work at the site.

Information and Training Program

As part of the safety and health program, employers are

required to develop and implement a program to inform workers (including contractors and subcontractors) performing hazardous waste operations of the level and degree of exposure they are likely to encounter.

Employers also are required to develop and implement procedures for introducing effective new technologies that provide improved worker protection in hazardous waste operations. Examples include foams, absorbents, adsorbents, neutralizers, etc.

Training makes workers aware of the potential hazards they may encounter and provides the necessary knowledge and skills to perform their work with minimal risk to their safety and health. The employer must develop a training program for all employees exposed to safety and health hazards during hazardous waste operations. Both supervisors and workers must be trained to recognize hazards and to prevent them; to select, care for and use respirators properly as well as other types of personal protective equipment; to understand engineering controls and their use; to use proper decontamination procedures; to understand the emergency response plan, medical surveillance requirements, confined space entry procedures, spill containment program, and any appropriate work practices. Workers also must know the names of personnel and their alternates responsible for site safety and health. The amount of instruction differs with the nature of the work operations, as indicated in the table below.

Employees at all sites must not perform any hazardous waste operations unless they have been trained to the level required by their job function and responsibility and have been certified by their instructor as having completed the necessary training. All emergency responders must receive refresher training sufficient to maintain or demonstrate competency annually. Employee training requirements are further defined by the nature of the work (e.g., temporary emergency response personnel, firefighters, safety officers, HAZMAT personnel, incident commanders, etc.). These

requirements may include recognizing and knowing the hazardous materials and their risks, knowing how to select and use appropriate personal protective equipment, and knowing the appropriate control, containment, or confinement procedures and how to implement them. The specific training and competency requirements for each personnel category are explained fully in the final rule (54 FR 42:9294, March 6, 1989). For a brief summary of training requirements, see Tables 1 and 2.

Employees who receive the training specified (see Table 1) must be given a written certificate upon successful completion of that training. That training need not be repeated if the employee goes to work at a new site; however, the employee must receive whatever additional training is needed to work safely at the new site. Employees who worked at hazardous waste sites before 1987 and received equivalent training need not repeat the initial training specified in Table 1, if the employer can demonstrate that in writing and certify that the employee has received such training.

Personal Protective Equipment Program

The standard further requires the employer to develop a written personal protective program for all employees involved in hazardous waste operations. As mentioned earlier, this program is also part of the site-specific safety and health program. The personal protective equipment program must include an explanation of equipment selection and use, maintenance and storage, decontamination and disposal, training and proper fit, donning and doffing procedures, inspection, in-use monitoring, program evaluation, and equipment limitations.

The employer must also provide and require the use of personal protective equipment where engineering control methods are infeasible to reduce worker exposures at or below the permissible exposure limit. Personal protective equipment must be selected that is appropriate to the

Table 1. Training Requirements

Hazardous Waste Clean-Up Sites	
Staff	
• Routine site employees	40 hours initial 24 hours field 8 hours annual refresher
• Routine site employees (minimal exposure)	24 hours initial 8 hours field 8 hours annual refresher
• Non-routine site employees	24 hours initial 8 hours field 8 hours annual refresher
Supervisor/Managers of	
• Routine site employees	40 hours initial 24 hours field 8 hours hazardous waste management 8 hours annual refresher
• Routine site employees (minimal exposure)	24 hours initial 8 hours field 8 hours hazardous waste management 8 hours annual refresher
• Non-routine site employees	24 hours initial 8 hours field 8 hours hazardous waste management 8 hours annual refresher
Treatment, Storage, and Disposal Sites	
Staff	
• General Site employees	24 hours initial or equivalent 8 hours annual refresher
• Emergency response personnel	Trained to a level of competency Annual refresher

Note: See 29 CFR 1910.120 (e) and (p)(7).

Table 2. Training Requirements

Other Emergency Response Staff	
Level 1 - First responder (awareness) level[1]	Sufficient training or proven experience in specific competencies
	Annual refresher
Level 2 - First responder (operations level)[2]	Level 1 competency and 8 hours initial or proven experience in specific competencies
	Annual refresher
Level 3 - HAZMAT technician[3]	24 hours of Level 2 and proven experience in specific competencies
	Annual refresher
Level 4 - HAZMAT specialist[4]	24 hours of Level 3 and proven experience in specific competencies
	Annual refresher
Level 5 - On-the-scene incident commander[5]	24 hours of Level 1 and additional competencies
	Annual refresher

Note: See 29 CFR 1910.120 (q) (6).

[1] *Witnesses or discovers* a release of hazardous materials and who are trained to notify the proper authorities.

2 *Responds* to releases of hazardous substances in a defensive manner, without trying to stop the releases.

[3] Responds aggressively to stop the release of hazardous substances.

[4] Responds with and in support to HAZMAT technicians, but who have specific knowledge of various hazardous substances.

[5] Assumes control of the incident scene beyond the first-responder awareness level.

requirements and limitations of the site, the task-specific conditions and duration, and the hazards and potential hazards identified at the site. As necessary, the employer must furnish the employee with positive-pressure self-contained breathing apparatus or positive-pressure air-line respirators equipped with an escape air supply, and with totally encapsulating chemical protective suits.

Monitoring

Airborne contaminants can present a significant threat to employee safety and health, thus making air monitoring an important component of an effective safety and health program. The employer must conduct monitoring before site entry at uncontrolled hazardous waste sites to identify conditions immediately dangerous to life and health, such as oxygen-deficient atmospheres and areas where toxic substance exposures are above permissible limits. Accurate information on the identification and quantification of airborne contaminants is useful for the following:

- Selecting personal protective equipment,
- Delineating areas where protection and controls are needed,
- Assessing the potential health effects of exposure, and
- Determining the need for specific medical monitoring.

After a hazardous waste cleanup operation begins, the employer must periodically monitor those employees who are likely to have higher exposures to determine if they have been exposed to hazardous substances in excess of permissible exposure limits. The employer must also monitor for any potential condition that is immediately dangerous to life and health or for higher exposures that may occur as a result of new work operations.

Medical Surveillance

A medical surveillance program will help to assess and monitor the health and fitness of employees working with

hazardous substances. The employer must establish a medical surveillance program for the following:

- All employees exposed or potentially exposed to hazardous substances or health hazards above the permissible exposure limits for more than 30 days per year;
- Workers exposed above the published exposure levels (if there is no permissible exposure limit for these substances) for 30 days or more a year;
- Workers who wear approved respirators for 30 or more days per year on site;
- Workers who are exposed to unexpected or emergency releases of hazardous wastes above exposure limits (without wearing appropriate protective equipment) or who show signs, symptoms or illness that may have resulted from exposure to hazardous substances; and
- Members of hazardous materials (HAZMAT) teams.

All examinations must be performed under the supervision of a licensed physician, without cost to the employee, without loss of pay and at a reasonable time and place. Examinations must include a medical and work history with special emphasis on symptoms related to the handling of hazardous substances and health hazards and to fitness for duty including the ability to wear any required personal protective equipment under conditions that may be expected at the work site. These examinations must be given as follows:

- Prior to job assignment and annually thereafter (or every 2 years if a physician determines that is sufficient),
- At the termination of employment,*
- Before reassignment to an area where medical examinations are not required,*
- If the examining physician believes that a periodic followup is medically necessary, and
- As soon as possible for employees injured or becoming ill from exposure to hazardous substances during an emergency, or who develop signs or symptoms of overexposure from hazardous substances.

*If the employee has not had an examination within the last 6 months.

The employer must give the examining physician a copy of the standard and its appendices, a description of the employee's duties relating to his/her exposure, the exposure level or anticipated exposure level, a description of any personal protective and respiratory equipment used or to be used, and any information from previous medical examinations. The employer must obtain a written opinion from the physician that contains the results of the medical examination and any detected medical conditions that would place the employee at an increased risk from exposure, any recommended limitations on the employee or upon the use of personal protective equipment, and a statement that the employee has been informed by the physician of the results of the medical examination. The physician is not to reveal in the written opinion given to the employer specific findings or diagnoses unrelated to employment.

Decontamination Procedures

Decontamination procedures are a component of the site-specific safety and health plan and, consequently, must be developed, communicated to employees, and implemented before workers enter a hazardous waste site. As necessary, the site safety and health officer must require and monitor decontamination of the employee or decontamination and disposal of the employee's clothing and equipment, as well as the solvents used for decontamination, before the employee leaves the work area. If an employee's non-impermeable clothing becomes grossly contaminated with hazardous substances, the employee must immediately remove that clothing and take a shower. Impermeable protective clothing must be decontaminated before being removed by the employee.

Protective clothing and equipment must be decontaminated, cleaned, laundered, maintained, or replaced to retain effectiveness. The employer must inform any person who launders or cleans such clothing or equipment of the potentially harmful effects of exposure to hazardous substances.

Employees who are required to shower must be provided showers and change rooms that meet the requirements of

29 CFR 1910.141, "Subpart J-General Environmental Controls." In addition, unauthorized employees must not remove their protective clothing or equipment from change rooms unless authorized to do so.

Emergency Response

Proper emergency planning and response are important elements of the safety and health program that help minimize employee exposure and injury. The standard requires that the employer develop and implement a written emergency response plan to handle possible emergencies before performing hazardous waste operations. The plan must include, at uncontrolled hazardous waste sites and at treatment, storage, and disposal facilities, the following elements*:

- Personnel roles, lines of authority, and communication procedures,
- Pre-emergency planning,
- Emergency recognition and prevention,
- Emergency medical and first-aid treatment,
- Methods or procedures for alerting onsite employees,
- Safe distances and places of refuge,
- Site security and control,
- Decontamination procedures,
- Critique of response and followup,
- Personal protective and emergency equipment, and
- Evacuation routes and procedures.

In addition to the above requirements, the plan must include site topography, layout, and prevailing weather conditions; and procedures for reporting incidents to local, State, and Federal government agencies.

The procedures must be compatible with and integrated into the disaster, fire and/or emergency response plans of the site's nearest local, State, and Federal agencies. Emergency

*Emergency response to the release of hazardous substances beyond clean-up and TSD sites must also have plans that include these elements and other specific requirements as indicated in 1910.120 (q).

response organizations may use the local or State emergency response plans, or both, as part of their emergency response plan to avoid duplication of Federal regulations.

The plan requirements also must be rehearsed regularly, reviewed periodically, and amended, as necessary, to keep them current with new or changing site conditions or information. A distinguishable and distinct alarm system must be in operation to notify employees of emergencies. The emergency plan also must be made available for inspection and copying by employees, their representatives, OSHA personnel and other governmental agencies with relevant responsibilities.

When deemed necessary, employees must wear positive-pressure self-contained breathing apparatus and approved self-contained compressed-air breathing apparatus with approved cylinders. In addition, back-up and first-aid support personnel must be available for assistance or rescue.

Other Provisions

As already indicated, as part of an effective safety and health program, the employer must institute control methods and work practices that are appropriate to the specific characteristics of the site. Such controls are essential to successful worker protection. Some control methods are described in the following paragraphs.

Engineering Controls and Work Practices

To the extent feasible, the employer must institute engineering controls and work practices to help reduce and maintain employee exposure at or below permissible exposure limits. To the extent not feasible, engineering and work practice controls may be supplemented with personal protective equipment. Examples of suitable and feasible engineering controls include the use or pressurized cabs or control booths on equipment, and/or remotely operated materials handling equipment. Examples of safe work practices include removing all non-essential employees from potential exposure while opening drums, wetting down dusty operations, and placing employees upwind of potential hazards.

Handling and Labeling Drums and Containers

Prior to handling a drum or container, the employer must assure that drums or containers meet the required OSHA, EPA (40 CFR Parts 264-265 and 300), and Department of Transportation (DOT) regulations (49 CFR Parts 171-178), and are properly inspected and labeled. Damaged drums or containers must be emptied of their contents, using a device classified for the material being transferred, and must be properly discarded. In areas where spills, leaks or ruptures occur, the employer must furnish employees with salvage drums or containers, a suitable quantity of absorbent material, and approved fire-extinguishing equipment in the event of small fires. The employer must also inform employees of the appropriate hazard warnings of labeled drums, the removal of soil or coverings, and the dangers of handling unlabeled drums or containers without prior identification of their contents. To the extent feasible, the moving of drums or containers must be kept to a minimum, and a program must be implemented to contain and isolate hazardous substances being transferred into drums or containers. In addition, an approved EPA ground-penetrating device must be used to determine the location and depth of any improperly discarded drums or containers.

The employer must also ensure that safe work practices are instituted before opening a drum or container. For example, air-line respirators and approved electrical equipment must be protected from possible contamination, and all equipment must be kept behind any existing explosion barrier.* Only tools or equipment that prevent ignition shall be used. All employees not performing the operation shall be located at a safe distance and behind a suitable barrier to protect them from accidental explosions. In addition, standing on or working from drums or containers is prohibited.
Special care also must be given when an employee handles containers of shock-sensitive waste, explosive materials, or

*A physical barricade, natural or man-made, that has been designed and constructed of sufficient thickness and density to withstand or deflect the impact loads of an adjacent explosion.

laboratory waste packs. Where an emergency exists, the employer must ensure the following:

- Evacuate non-essential employees from the transfer area;
- Protect equipment operators from exploding containers by using a barrier, and
- Make available a continuous means of communication (e.g., suitable radios or telephones), and a distinguishable and distinct alarm system to signal the beginning and end of activities where explosive wastes are handled.

If drums or containers bulge or swell or show crystalline material on the outside, they must not be moved onto or from the site unless appropriate containment procedures have been implemented. In addition, lab packs must be opened only when necessary and only by a qualified person. Prior to shipment to a licensed disposal facility, all drums or containers must be properly labeled and packaged for shipment. Staging areas also must be kept to a minimum and provided with adequate access and egress routes.

Sanitation of Temporary Workplaces

Each temporary worksite must have a supply of potable water that is stored in tightly closed and clearly labelled containers and equipped with a tap. Disposable cups and a receptacle for cup disposal must also be provided. The employer must also clearly mark all water outlets that are unsafe for drinking, washing, or cooking. Temporary worksites must be equipped with toilet facilities. If there are no sanitary sewers close to or on the hazardous waste site, the employer must provide the following toilet facilities unless prohibited by local codes:

- Privies,
- Chemical toilets,
- Recirculating toilets, or
- Combustion toilets.

Heated, well-ventilated, and well-lighted sleeping quarters must be provided for workers who guard the worksite. In addition, washing facilities for all workers must be near the

worksite, within controlled work zones,* and so equipped to enable employees to remove hazardous substances. The employer must also ensure that food service facilities are licensed.

Recordkeeping

In 1988, OSHA revised the standard requiring employers to provide employees with information to assist in the management of their own safety and health. The standard, "Access to Employee Exposure and Medical Records" (29 CFR 1910.20), permits direct access to these records by employees exposed to hazardous materials, or by their designated representatives, and by OSHA. The rule applies to, but does not require, medical and exposure records maintained by the employer.

The employer must keep exposure records for 30 years and medical records for at least the duration of employment plus 30 years. Records of employees who have worked for less than 1 year need not be retained after employment, but the employer must provide these records to the employee upon termination of employment. First-aid records of one-time treatment need not be retained for any specified period.

The employer must inform each employee of the existence, location, and availability of these records. Whenever an employer plans to stop doing business and there is no successor employer to receive and maintain these records, the employer must notify employees of their right to access to records at least 3 months before the employer ceases to do business. At the same time, employers also must notify the National Institute for Occupational Safety and Health.

Under the hazardous waste standard, at a minimum, medical records must include the following information:

- Employee's name and social security number
- Physicians' written opinions,
- Employee's medical complaints related to exposure to hazardous substances, and
- Information provided to the treating physician.

*A designated work area within the worksite.

Hazard Communication Standard (HCS)

Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) requires employers covered by the Hazard Communication Standard (29 CFR 1910.1200) to maintain Material Safety Data Sheets (MSDS's) and submit such information to State emergency response commissions, local emergency plannin committees, and the local fire department. Under this requirement, employers covered by HCS must provide chemical hazard information to both employees and surrounding communities. Consequently, in the case of an emergency response situation to hazardous substances at a site, the local fire department may already be aware of the chemicals present at the site since data may have been provided through MSDS's.

Summary

Hazardous wastes, when not handled properly, can pose a significant safety and health risk. OSHA recognizes the need to improve the quality of the hazardous waste work environment and has, therefore, issued this standard. This standard provides employers and employees with the information and training necessary to improve workplace safety and health, thereby greatly reducing the number of injuries and illnesses resulting from exposure to hazardous waste.

STATES WITH APPROVED PLANS

Alaska Department of Labor
P.O. Box 21149
Juneau, ALASKA 99802-1149
(907) 465-2700

Industrial Commission of Arizona
800 W. Washington
Phoenix, ARIZONA 85007
(602) 255-5795

California Department of
Industrial Relations
525 Golden Gate Avenue
San Francisco, CALIFORNIA 94102
(415) 557-3356

Connecticut Department of Labor
200 Folly Brook Boulevard
Wethersfield, CONNECTICUT 06109
(203) 566-5123

Hawaii Department of Labor and
Industrial Relations
830 Punchbowl Street
Honolulu, HAWAII 96813
(808) 548-3150

Indiana Department of Labor
1013 State Office Building
100 North Senate Avenue
Indianapolis, INDIANA 46204
(317) 232-2663

Iowa Division of Labor Services
1000 E. Grand Avenue
Des Moines, IOWA 50319
(515) 281-3447

Kentucky Labor Cabinet
U.S. Highway 127 South
Frankfort, KENTUCKY 40601
(502) 564-3070

Maryland Division of Labor and
Industry
Department of Licensing and
Regulation
501 St. Paul Place
Baltimore, MARYLAND 21202-2272
(301) 333-4176

Michigan Department of Labor
309 N. Washington
P.O. Box 30015
Lansing, MICHIGAN 48909
(517) 373-9600

Michigan Department of Public Health
3423 North Logan Street
Box 30195
Lansing, MICHIGAN 48909
(517) 373-1220

Minnesota Department of Labor and
Industry
443 Lafayette Road
St. Paul, MINNESOTA 55101
(612) 296-2342

Nevada Department of Industrial
Relations
Division of Occupational Safety and
Health
Capitol Complex
1370 S. Curry Street
Carson City, NEVADA 89710
(702) 885-5240

New Mexico Environmental
Improvement Dgivision
Health and Environment Department
1190 - St. Francis Drive - N2200
Santa Fe, NEW MEXICO 87503-0968
(505) 827-2850

New York Department of Labor
One Main Street
Brooklyn, NEW YORK 11201
(718) 797-7668

North Carolina Department of Labor
4 West Edenton Street
Raleigh, NORTH CAROLINA 27603
(919) 733-7166

Accident Prevention Division
Oregon Department of Insurance
and Finance
Labor and Industries Building
Salem, OREGON 97310
(503) 378-3304

Puerto Rico Department of Labor
and Human Resources
Prudencio Rivera Martinez Building
505 Munoz Rivera Avenue
Hato Rey, PUERTO RICO 00918
(809) 754-2119-22

South Carolina Department of Labor
3600 Forest Drive
P.O. Box 11329
Columbia, SOUTH CAROLINA
29211-1329
(803) 734-9594

Tennessee Department of Labor
501 Union Building
Suite "A" - 2nd floor
Nashville, TENNESSEE 37219
(615) 741-2582

Utah Occupational Safety and Health
160 East 300 South
P.O. Box 5800
Salt Lake City, UTAH 84110-5800
(801) 530-6900

Vermont Department of Labor
and Industry
120 State Street
Montpelier, VERMONT 05602
(802) 828-2765

Virgin Islands Department of Labor
Box 890
Christiansted
St. Croix, VIRGIN ISLANDS 00820
(809) 773-1994

Virginia Department of Labor
and Industry
P.O. Box 12064
Richmond, VIRGINIA 23241-0064
(804) 786-2376

Washington Department of Labor
and Industries
General Administration Building
Room 334 - AX-31
Olympia, WASHINGTON 98504-0631
(206) 753-6307

Wyoming Department of Occupational
Health and Safety
604 East 25th Street
Cheyenne, WYOMING 82002

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Related Publications

OSHA 3110 Access to Medical and Exposure Records

OSHA 2056 All About OSHA

OSHA 3084 Chemical Hazard Communication

OSHA 3047 Consultation Services for the Employer

OSHA 3088 How to Prepare for Workplace Emergencies

OSHA 3111 Hazard Communication Guidelines for Compliance

OSHA 2236 Materials Handling and Storage

OSHA 3077 Personal Protective Equipment

OSHA 3079 Respiratory Protection

(A single free copy of the above materials can be obtained from OSHA field offices or the OSHA Publications Office, 200 Constitution Avenue, N. W., N 3101, Washington, D. C. 20210, (202) 523-9667.)

OSHA 3104 Hazard Communication--A Compliance Kit (A reference guide to step-by-step requirements for compliance with the OSHA standard.)

(This kit is available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, (202) 783-3238, GPO Order No. 929-022-000009; $18--domestic; $22.50--foreign.)

Emergency Response Guidebook - U.S. Department of Transportation, Publication No. DOT-P-5800-4, 1987. (Available from the American Trucking Association, phone: 1-800-ATA-LINE and the Hazardous Materials Information Exchange, phone: 1-800-PLAN-FOUR. Price $5.00.)

Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities - NIOSH/OSHA/USCG/EPA. National Institute for Occupational Safety and Health, Publication No. DHHS (NIOSH) No. 85-115, 1985. (Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, (202) 783-3238, GPO Order No. 017-033-00419-6, $5.00)

U.S. Department of Labor
Occupational Safety and Health Administration
Regional Offices

Region I
(CT,* MA, ME, NH, RI, VT*)
133 Portland Street
1st Floor
Boston, MA 02114
Telephone (617) 565-7164

Region II
(NJ, NY,* PR, VI*)
201 Varick Street
Room 670
New York, NY 10014
Telephone (212) 337-2378

Region III
(DC, DE, MD,* PA, VA,* WV)
Gateway Building, Suite 2100
3535 Market Street
Philadelphia, PA 19104
Telephone (215) 596-1201

Region IV
(AL, FL, GA, KY,* MS, NC,* SC,* TN*)
1375 Peachtree Street, N.E.
Suite 587
Atlanta, GA 30367
Telephone (404) 347-3573

Region V
(IL, IN,* MI,* MN,* OH, WI)
230 South Dearborn Street
Room 3244
Chicago, IL 60604
Telephone (312) 353-2220

Region VI
(AR, LA, NM,* OK, TX)
525 Griffin Street
Room 602
Dallas, TX 75202
Telephone (214) 767-4731

Region VII
(IA,* KS, MO, NE)
911 Walnut Street
Room 406
Kansas City, MO 64106
Telephone (816) 426-5861

Region VIII
(CO, MT, ND, SD, UT,* WY*)
Federal Building, Room 1576
1961 Stout Street
Denver, CO 80294
Telephone (303) 844-3061

Region IX
(AZ,* CA,* HI,* NV*)
71 Stevenson Street
Room 415
San Francisco, CA 94105
Telephone (415) 995-5672

Region X
(AK,* ID, OR,* WA*)
Federal Office Building
909 First Avenue
Room 6003
Seattle, WA 98174
Telephone (206) 442-5930

*These states and territories operate their own OSHA-approved job safety and health programs (Connecticut and New York plans cover public employees only). States with approved programs must have a standard that is identical to, or at least as effective, as the Federal standard.